

(FILE 'HOME' ENTERED AT 17:47:47 ON 24 JUN 2004)

FILE 'USPATFULL' ENTERED AT 17:47:58 ON 24 JUN 2004

L1 478 S TERPINEOL/CLM  
L2 8 S L1 AND TOPICAL/CLM  
L3 0 S TERPINEOL/AB AND TOPICAL/AB  
L4 61 S TERPINEOL/AB  
L5 1 S L4 AND TOPICAL/CLM

FILE 'CAPLUS, USPATFULL' ENTERED AT 17:52:23 ON 24 JUN 2004

L6 34 FILE CAPLUS  
L7 79 FILE USPATFULL

TOTAL FOR ALL FILES

L8 113 S TERPENEOL OR TERPENIOL  
L9 19481 FILE CAPLUS  
L10 1610 FILE USPATFULL

TOTAL FOR ALL FILES

L11 21091 S TERPENEOL OR TERPENIOL OR TERPENOID  
L12 27 FILE CAPLUS  
L13 68 FILE USPATFULL

TOTAL FOR ALL FILES

L14 95 S L11 AND (RETINOIC OR RETINOID)  
L15 5 FILE CAPLUS  
L16 42 FILE USPATFULL

TOTAL FOR ALL FILES

L17 47 S L11 AND (RETINOIC OR RETINOID) AND TOPICAL

FILE 'REGISTRY' ENTERED AT 17:59:13 ON 24 JUN 2004

L18 0 S TERPENIOL/CN  
L19 0 S TERPENEOL/CN  
L20 1 S TERPINEOL/CN  
L21 0 S TERPENEOL/CN  
L22 1 S TERPENEOL  
L23 3 S TERPENE ALCOHOL  
SAVE ALL L10079416/L

FILE 'USPATFULL, CAPLUS' ENTERED AT 18:18:09 ON 24 JUN 2004

FILE 'CAPLUS' ENTERED AT 18:29:19 ON 24 JUN 2004

L24 9599 S TERPINEOL  
L25 38 S L24 AND (TOPICAL AND SKIN)  
L26 13 S L25 AND TREAT?  
L27 15 S TERPINEOL AND CYTOCHROME

FILE 'MEDLINE, SCISEARCH, EMBASE, CAPLUS' ENTERED AT 18:51:42 ON 24 JUN 2004

L28 0 FILE MEDLINE  
L29 0 FILE SCISEARCH  
L30 0 FILE EMBASE  
L31 1 FILE CAPLUS  
TOTAL FOR ALL FILES

L32 1 S TERPINEOL AND (P450 1A)  
L33 0 FILE MEDLINE  
L34 0 FILE SCISEARCH  
L35 0 FILE EMBASE  
L36 1 FILE CAPLUS

TOTAL FOR ALL FILES

L37 1 S TERPINEOL AND (P450 (3A) 1A)  
L38 218 FILE MEDLINE

L39 293 FILE SCISEARCH

L40 452 FILE EMBASE

L41 205 FILE CAPLUS

TOTAL FOR ALL FILES

L42 1168 S (P450 (3A) 1A)

L43 208 FILE MEDLINE  
L44 292 FILE SCISEARCH  
L45 448 FILE EMBASE  
L46 711 FILE CAPLUS  
TOTAL FOR ALL FILES  
L47 1659 S (CYTOCHROME (5A) 1A)  
L48 2 FILE MEDLINE  
L49 0 FILE SCISEARCH  
L50 1 FILE EMBASE  
L51 2 FILE CAPLUS  
TOTAL FOR ALL FILES  
L52 5 S L47 AND (TERPENOID OR TERPINEOL OR TERPEN?)

FILE 'STNGUIDE' ENTERED AT 18:58:25 ON 24 JUN 2004

L27 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN

AB . . . days with  $\beta$ -ionone i.p. or mixed with the diet increased the activities of biphenyl 4-hydroxylase, glucuronyl transferase, 4-nitrobenzoate reductase, and **cytochrome P-450** in the 10,000 + g supernatants of liver homogenates by 50-70% and hexobarbitone sleeping times were decreased by 50%. Similar treatment with limonine, borneol, citral, and **terpineol** increased enzyme and **cytochrome P-450** levels by 25%. Linalool, nerolidol, and squalene produced no increase in the activities of biphenyl 4-hydroxylase, glucuronyl transferase, or **cytochrome P-450**, but increased the activity of 4-nitrobenzoate reductase by 25-50%. The induction produced by  $\beta$ -ionone was maximal after a single. . .

IT 9035-51-2, **Cytochromes P 450**

(in liver, effect of dietary anutrient and terpenoids on)

AN 1969:436926 CAPLUS

DN 71:36926

=>

L27 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Biotransformations of  $\alpha$ - **terpineol** in the rat: its effects  
on the liver microsomal **cytochrome** P-450 system  
AB The metabolism of  $\alpha$ - **terpineol** (I) was studied in rats by extracting  
the metabolites from the urine of I-treated rats and analyzing them by  
gas.  
ST **terpineol** metab liver enzyme  
IT Microsome  
    (drug-metabolizing enzymes of liver, **terpineol** administration  
    effect on)  
IT Liver, composition  
    (drug-metabolizing enzymes of microsomes of, **terpineol**  
    administration effect on)  
IT Enzymes  
RL: BIOL (Biological study)  
    (drug-metabolizing, of liver microsomes, **terpineol** metabolism in  
    relation to)  
IT 5027-76-9, Oleuropeic acid 58506-22-2 91006-79-0  
RL: BIOL (Biological study)  
    (as **terpineol** metabolite, in urine, liver microsome  
    drug-metabolizing enzymes in relation to)  
IT 98-55-5D,  $\alpha$ - **Terpineol**, metabolites  
RL: FORM (Formation, nonpreparative)  
    (formation of, liver microsome drug-metabolizing enzymes in relation  
    to)  
IT 98-55-5,  $\alpha$ - **Terpineol**  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
    (metabolism of, liver microsome drug-metabolizing enzymes response to)  
IT 9023-03-4, NADP-**cytochrome** c reductase 9035-39-6,  
**Cytochrome** b5 9035-51-2, **Cytochrome** P 450, biological  
studies  
RL: BIOL (Biological study)  
    (of liver microsomes, **terpineol** metabolism in relation to)  
AN 1988:468374 CAPLUS  
DN 109:68374

L27 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Characterization of a P-450 system which catalyzes the oxidation of **terpineol**  
AB The importance of **cytochromes** P 450 in intermediary metabolism has led to the purification and sequence determination of more than 150 different enzymes, although. . . protein structure-function relationships of P-450s, the authors have isolated a novel, soluble P 450 system from an organism which metabolizes  $\alpha$ - **terpineol** as a sole carbon source, cloned and sequenced the operon which encodes this P 450 system, and analyzed the proteins.  
ST **cytochrome** P450 **terpineol** oxidn Pseudomonas gene  
IT Pseudomonas  
    (**cytochrome** P 450 system for oxidation of  $\alpha$ -  
    **terpineol** in, biochem. and genetic characterization of)  
IT Gene, microbial  
    RL: BIOL (Biological study)  
        (for **cytochrome** P 450 for  $\alpha$ - **terpineol** oxidation  
        in Pseudomonas species)  
IT Operon  
    (for **cytochrome** P 450 system, for  $\alpha$ - **terpineol**  
    oxidation in Pseudomonas species)  
IT 98-55-5,  $\alpha$ - **Terpineol**  
    RL: RCT (Reactant); RACT (Reactant or reagent)  
        (reaction of, with **cytochrome** P 450 system of Pseudomonas  
        species)  
IT 9035-51-2, **Cytochrome** P450, reactions  
    RL: RCT (Reactant); RACT (Reactant or reagent)  
        (terp, **terpineol** oxidation by, of Pseudomonas species)  
AN 1994:100206 CAPLUS  
DN 120:100206

L27 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN

TI Evidence for the involvement of **cytochrome P-450**-dependent monooxygenases in the allylic hydroxylation of **terpineols** by Nicotiana tabacum cell cultures

AB A microsomal preparation isolated from suspension cells of Nicotiana tabacum was able to catalyze the hydroxylation of **terpineols** and their acetates at the allylic positions. The hydroxylase activities depended strictly on the presence of NADPH as the reducing cofactor and on O<sub>2</sub> as the O donor. The hydroxylases were inhibited by **cytochrome P 450** enzyme inhibitors, such as CO, metyrapone, and miconazole. Thus, it was established that these hydroxylases are **cytochrome P 450**-dependent monooxygenases.

ST **terpineol** metab **cytochrome P450** monooxygenase tobacco

IT Tobacco  
(involvement of **cytochrome P 450**-dependent monooxygenases in the allylic hydroxylation of **terpineols** by tobacco cell cultures)

IT 53-57-6, NADPH 58-68-4, NADH 146-14-5, FAD 146-17-8, FMN  
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(cofactor dependence of **cytochrome P 450**-dependent monooxygenases in the allylic hydroxylation of **terpineols** by tobacco cell cultures)

IT 7782-44-7, Oxygen, biological studies  
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(**cytochrome P 450**-dependent monooxygenases in the allylic hydroxylation of **terpineols** by tobacco cell cultures in relation to)

IT 9038-14-6, Monooxygenase  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(**cytochrome P 450**-dependent; involvement of **cytochrome P 450**-dependent monooxygenases in the allylic hydroxylation of **terpineols** by tobacco cell cultures)

IT 7785-54-8 10198-23-9,  $\beta$ -Terpinyl acetate 10235-63-9,  
 $\gamma$ -Terpinyl acetate 58206-95-4  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(involvement of **cytochrome P 450**-dependent monooxygenases in the allylic hydroxylation of **terpineols** and terpinyl acetates by tobacco cell cultures)

IT 22472-54-4 83921-03-3 83921-04-4 88437-32-5  
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)  
(involvement of **cytochrome P 450**-dependent monooxygenases in the allylic hydroxylation of **terpineols** and terpinyl acetates by tobacco cell cultures)

IT 138-87-4,  $\beta$ - **Terpineol** 586-81-2,  $\gamma$ - **Terpineol**  
7785-53-7 10482-56-1  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(involvement of **cytochrome P 450**-dependent monooxygenases in the allylic hydroxylation of **terpineols** by tobacco cell cultures)

IT 772-36-1 19894-91-8 22549-60-6 71697-84-2 83921-02-2 160424-44-2  
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)  
(involvement of **cytochrome P 450**-dependent monooxygenases in the allylic hydroxylation of **terpineols** by tobacco cell cultures)

AN 1995:199345 CAPLUS  
DN 122:76721

L52 ANSWER 3 OF 5 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.  
on STN

AN 2001116662 EMBASE

TI Effects of a water-soluble extract of rosemary and its purified component rosmarinic acid on xenobiotic-metabolizing enzymes in rat liver.

AU Debersac P.; Vernevaud M.-F.; Amiot M.-J.; Suschetet M.; Siess M.-H.

CS P. Debersac, U. Mixte Rech. Toxicol. Alimentaire, Inst. Natl. la Rech. Agronom.-Ecole, Natl. Sup. Biol. Appl. Nut./Aliment., 17 rue Sully, 21065 Dijon Cedex, France. [debersac@dijon.inra.fr](mailto:debersac@dijon.inra.fr)

SO Food and Chemical Toxicology, (2001) 39/2 (109-117).

Refs: 40

ISSN: 0278-6915 CODEN: FCTOD7

PUI S 0278-6915(00)00117-4

CY United Kingdom

DT Journal; Article

FS 029 Clinical Biochemistry  
052 Toxicology

LA English

SL English

AB The effects of a water-soluble extract (WSE) of rosemary and its purified antioxidant rosmarinic acid (RA) on xenobiotic metabolizing enzymes (XME) were studied in rat liver after dietary administration. The modulation of phase I enzymes such as **cytochrome P450 (CYP) 1A, 2B, 2E1, 3A**, and phase II enzymes such as glutathione S-transferase (GST), quinone reductase (QR) and UDP-glucuronosyltransferase (UGT) was evaluated by measuring enzyme activities with specific substrates. Protein levels of CYPs and rGST A1/A2, A3/A5, M1, M2 and P1 were measured using antibodies in Western blots. Caffeic acid was also studied because it results from RA biotransformation in rat after oral administration. Male SPF Wistar rats received the different compounds at 0.5% (w/w) incorporated into their diet for 2 weeks. WSE, containing RA, flavones and monoterpenes enhanced CYP 1A1, 2B1/2, 2E1 and GST (especially rGST A3/A5, M1 and M2), QR and UGT. On the contrary, no modification of XME was observed in response to RA or CA (except for a slight increase of UGT activity after CA treatment). The induction of XME by WSE could be attributed to flavones, monoterpenes or an additive effect of all components. .COPYRGT. 2001 Elsevier Science Ltd.

CT Medical Descriptors:

liver  
enzyme activity  
biotransformation  
diet supplementation  
enzyme induction  
enzyme modification  
chemical structure  
liver weight  
food composition  
drug effect  
xenobiotic metabolism  
nonhuman  
male  
rat  
animal experiment  
controlled study  
animal tissue  
article

Drug Descriptors:

\*Rosmarinus officinalis extract: TO, drug toxicity  
\*rosmarinic acid: TO, drug toxicity  
\*drug metabolizing enzyme: EC, endogenous compound  
antioxidant: TO, drug toxicity  
cytochrome P450 3A: EC, endogenous compound  
cytochrome P450 1A1: EC, endogenous compound

cytochrome P450 2B1: EC, endogenous compound  
cytochrome P450 2E1: EC, endogenous compound  
glutathione transferase: EC, endogenous compound  
reduced nicotinamide adenine dinucleotide (phosphate) dehydrogenase  
(quinone): EC, endogenous compound  
glucuronosyltransferase: EC, endogenous compound  
caffeic acid  
flavone derivative

**terpene**

unclassified drug

RN (rosmarinic acid) 20283-92-5; (glutathione transferase) 50812-37-8;  
(reduced nicotinamide adenine dinucleotide (phosphate) dehydrogenase  
(quinone)) 9032-20-6; (glucuronosyltransferase) 37329-64-9, 9030-08-4;  
(caffeic acid) 27323-69-9, 331-39-5

L52 ANSWER 2 OF 5 MEDLINE on STN  
AN 2001169786 MEDLINE  
DN PubMed ID: 11267703  
TI Effects of a water-soluble extract of rosemary and its purified component rosmarinic acid on xenobiotic-metabolizing enzymes in rat liver.  
AU Debersac P; Verneaut M F; Amiot M J; Suschetet M; Siess M H  
CS Unite Mixte de Recherche de Toxicologie Alimentaire, Institut National de la Recherche Agronomique-Ecole Nationale Supérieure de Biologie Appliquée à la Nutrition et à l'Alimentation, BP 86510, Dijon, France.. debersac@dijon.inra.fr  
SO Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association, (2001 Feb) 39 (2) 109-17.  
Journal code: 8207483. ISSN: 0278-6915.  
CY England: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200104  
ED Entered STN: 20010502  
Last Updated on STN: 20010502  
Entered Medline: 20010426  
AB The effects of a water-soluble extract (WSE) of rosemary and its purified antioxidant rosmarinic acid (RA) on xenobiotic metabolizing enzymes (XME) were studied in rat liver after dietary administration. The modulation of phase I enzymes such as **cytochrome P450** (CYP) 1A, 2B, 2E1, 3A, and phase II enzymes such as glutathione S-transferase (GST), quinone reductase (QR) and UDP-glucuronosyltransferase (UGT) was evaluated by measuring enzyme activities with specific substrates. Protein levels of CYPs and rGST A1/A2, A3/A5, M1, M2 and P1 were measured using antibodies in Western blots. Caffeic acid was also studied because it results from RA biotransformation in rat after oral administration. Male SPF Wistar rats received the different compounds at 0.5% (w/w) incorporated into their diet for 2 weeks. WSE, containing RA, flavones and monoterpenes enhanced CYP 1A1, 2B1/2, 2E1 and GST (especially rGST A3/A5, M1 and M2), QR and UGT. On the contrary, no modification of XME was observed in response to RA or CA (except for a slight increase of UGT activity after CA treatment). The induction of XME by WSE could be attributed to flavones, monoterpenes or an additive effect of all components.  
CT Check Tags: Male; Support, Non-U.S. Gov't  
Animals  
Biological Markers  
Body Weight: DE, drug effects  
Chromatography, High Pressure Liquid  
\*Cinnamates: CH, chemistry  
\*Cinnamates: PD, pharmacology  
Cytosol: DE, drug effects  
Cytosol: EN, enzymology  
Diet  
Flavonoids: AN, analysis  
Immunoblotting  
\*Lamiaceae: CH, chemistry  
Liver: DE, drug effects  
\*Liver: EN, enzymology  
Microsomes, Liver: DE, drug effects  
Microsomes, Liver: EN, enzymology  
Organ Weight: DE, drug effects  
Plant Extracts: CH, chemistry  
Plant Extracts: PD, pharmacology  
Rats  
Rats, Wistar  
Spectrophotometry, Ultraviolet

Stimulation, Chemical

**Terpenes: AN, analysis**

\*Xenobiotics: ME, metabolism

RN 537-15-5 (rosmarinic acid)

CN 0 (Biological Markers); 0 (Cinnamates); 0 (Flavonoids); 0 (Plant Extracts); 0 (**Terpenes**); 0 (Xenobiotics)

L20 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 8000-41-7 REGISTRY  
CN **Terpineol (6CI, 8CI, 9CI)** (CA INDEX NAME)  
OTHER NAMES:  
CN Terpineol 318  
DR 8031-32-1, 11103-96-1, 37195-01-0  
MF C10 H18 O  
CI COM, MAN  
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, NAPRALERT, PDLCOM\*, PIRA, PROMT, TOXCENTER, USPAT2, USPATFULL, VTB  
(\*File contains numerically searchable property data)  
Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)  
DT.CA CAplus document type: Conference; Journal; Patent; Report  
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)  
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)  
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study)  
  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
1623 REFERENCES IN FILE CA (1907 TO DATE)  
25 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
1628 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
40 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=>

L22 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 221273-05-8 REGISTRY  
CN **Terpeneol C (9CI)** (CA INDEX NAME)  
ENTE A volatile solvent, a terpenol (Nippon Terpene Chemical Co.)  
MF Unspecified  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS  
DT.CA CAplus document type: Patent  
RL.P Roles from patents: PRP (Properties); USES (Uses)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=>

L16 ANSWER 36 OF 42 USPATFULL on STN

SUMM . . . toxicity. The lipid soluble steroid prodrugs may be used where membrane traversal or fusion facilitates delivery. In the case of **topical** applications of anti-inflammatories, the water insolubility of the novel lipid soluble steroid prodrugs promotes skin penetration and the lifetime of. . .

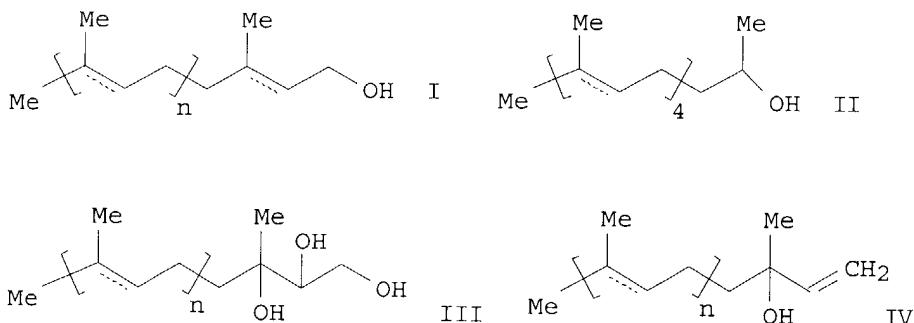
SUMM For **topical** applications, the steroid prodrugs may be used alone, may be mixed with one or more solubilizing agents or may be. . . with a delivery vehicle, and applied to the skin or mucosal membranes. Other penetrating and/or solubilizing agents useful for the **topical** application of the steroid prodrug include, for example, pyrrolidones such as 2-pyrrolidone, N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone, 5-methyl-2-pyrrolidone, 1-ethyl-2-pyrrolidone, 2-pyrrolidone-5-carboxylic acid, N-hydroxyethylpyrrolidone, N-cyclohexylpyrrolidone, . . . and decylmethylsulfoxide; amines and derivatives such as N,N-diethyl-m-toluamide, dodecylamine, ethoxylated amine, N,N-bis(2-hydroxy-ethyl)oleylamine, dodecyl-N,N-dimethylamino acetate, sodium pyroglutamate and N-hydroxylethylacetamide; terpenes and **terpenoids** such as a-pinenes, d-limonene, 3-carene, a-terpineol, terpinen-4-ol, careol, abisabolol, carvone, pulegone, piperitone, menthone, fenchone, cyclohexene oxide, limonene oxide, pinene oxide, cyclopentene oxide, ascaridol, 7-oxabicyclo(2.2.1)heptane, 1,8-cineole, safrole, 1-carvone, **terpenoid** cyclohexanone derivatives, acyclic terpenehydrocarbon chains, hydrocarbon terpenes, cyclic ether terpenes, cardamon seed extract, monoterpane terpineol and acetyl terpineol; essential oils. . .

SUMM . . . or the lung, the vesicles are preferably less than about 200  $\mu\text{m}$  in mean outside diameter. For intranasal, intrarectal or **topical** administration, the vesicles are preferably less than about 100  $\mu\text{m}$  in mean outside diameter. Large vesicles, between 1 and about. . .

SUMM . . . phosphate, prednisolone tebutate, prednisone, triamcinolone, triamcinolone acetonide, triamcinolone diacetate, triamcinolone hexacetonide and fludrocortisone acetate; vitamins such as cyanocobalamin neinoic acid, **retinoids** and derivatives such as retinol palmitate, and  $\alpha$ -tocopherol; peptides, such as manganese super oxide dimutase; enzymes such as alkaline phosphatase; . . .

PI US 6090800 20000718

L17 ANSWER 5 OF 47 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:274843 CAPLUS  
 DN 129:32339  
 ED Entered STN: 13 May 1998  
 TI Skin preparations for acne treatment containing terpene alcohols  
 IN Watanabe, Ikuo; Suzuki, Jun; Arata, Hiroyuki; Hori, Kimihiko  
 PA Kao Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM A61K031-045  
 ICS A61K031-035; A61K031-075; A61K031-19; A61K031-20; A61K031-715;  
 A61K007-40  
 CC 63-6 (Pharmaceuticals)  
 Section cross-reference(s): 62  
 FAN.CNT 1  
 PATENT NO. KIND DATE APPLICATION NO. DATE  
 PI JP 10114648 A2 19980506 JP 1996-287306 19961011  
 PRAI JP 1996-287306 19961011  
 OS MARPAT 129:32339  
 GI



AB Skin preps. for prophylaxis and therapy of acne contain  $\geq 1$  C20-25 terpene alcs. as active ingredients. The terpene alcs. may be I (dotted line represents optional bond; n = 3-4), II, III, or IV. The preps. may addnl. contain  $\geq 1$  selected from Bz202, macrolide antibiotics, tetracycline, carotenoids, **retinoids**, S, salicylic acid, resorcin, glycyrrhizinic acids, and tocopherols. Terpene alcs. show good absorbability and stability. An antiacne cream was prepared from containing geranylgeraniol, self-emulsifying glycerin monostearate, palm oil, perhydrosqualene, polyethylene glycol, EDTA, and H<sub>2</sub>O.

ST acne **topical** prepn terpene alc; geranylgeraniol skin prepn acne treatment

IT Acne

IT Cosmetics  
(antiacne skin preps. containing terpene alcs.)

IT Carotenes, biological studies  
**Retinoids**

IT Tocopherols  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(antiacne skin preps. containing terpene alcs.)

IT Alcohols, biological studies  
Alcohols, biological studies  
Diterpenes

Diterpenes

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydroxy diterpenes; antiacne skin prepns. containing terpene alcs.)

IT Sesterterpenes

Terpenes, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydroxy; antiacne skin prepns. containing terpene alcs.)

IT Antibiotics

(macrolide; antiacne skin prepns. containing terpene alcs.)

IT Alcohols, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(terpenoid; antiacne skin prepns. containing terpene alcs.)

IT Drug delivery systems

(topical; antiacne skin prepns. containing terpene alcs.)

IT 150-86-7, Phytol 505-32-8, Isophytol 1113-21-9, Geranylinalool  
22488-05-7, Geranylarnesol 24034-73-9 74563-64-7, Phytantriol  
208102-30-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antiacne skin prepns. containing terpene alcs.)

IT 60-54-8D, Tetracycline, derivs. 69-72-7, Salicylic acid, biological studies  
94-36-0, Benzoyl peroxide, biological studies 108-46-3,  
1,3-Benzenediol, biological studies 1405-86-3, Glycyrrhizinic acid

7704-34-9, Sulfur, biological studies 18323-44-9, Clindamycin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antiacne skin prepns. containing terpene alcs.)

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L17 ANSWER 4 OF 47 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2002:51211 CAPLUS  
DN 136:107241  
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TI Methods of enhancing delivery of oil-soluble skin care actives using silicones  
IN Robinson, Larry Richard; Ha, Robert Bao Kim  
PA The Procter & Gamble Company, USA  
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CC 62-4 (Essential Oils and Cosmetics)  
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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002003930	A2	20020117	WO 2001-US21602	20010709
	WO 2002003930	A3	20020523		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2002022040	A1	20020221	US 2001-867235	20010529
	EP 1313427	A2	20030528	EP 2001-950988	20010709
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	BR 2001012048	A	20030617	BR 2001-12048	20010709
	JP 2004506613	T2	20040304	JP 2002-508385	20010709
PRAI	US 2000-613266	A	20000710		
	US 2001-867235	A	20010529		
	WO 2001-US21602	W	20010709		
AB	Water-in-silicone emulsion for enhancement of an oil-soluble skin care active comprising a silicone elastomer is described. An oil-soluble skin care active comprises 0.01-40% by weight of the composition of the oil phase and is selected from terpene alcs., phytosterol, anti-acne actives, beta-hydroxy acids, vitamin B3 compds., <b>retinoids</b> , anti-oxidants/radical scavengers, chelators, flavonoids, anti-inflammatory agents, anti-cellulite, <b>topical</b> anesthetics, and mixts. thereof. A composition further comprises an addnl. skin care active selected from sunscreen agents, particulate materials, conditioning agents, thickening agents, water-soluble vitamins, water-dispersible vitamins, oil-dispersible vitamins, and mixts. thereof. For example, a skin cream was prepared from (by weight): Phase A, containing disodium EDTA 0.10%, Me paraben 0.10%, Pr paraben 0.10%, benzyl alc. 0.25%, green tea extract 1.00%, glycerol 6% and water up to 100%; and Phase B, containing Dow Corning 9040 11.00%, KSG-21 4.00%, cyclomethicone 12.00%, fragrance 0.20%, and farnesol 3.00%. The ingredients of each phase were mixed together sep., and the Phase A was slowly added to Phase B while mixing. The resulting product exhibits enhanced penetration of the oil-soluble skin care actives and good aesthetics.				
ST	silicone elastomer oil sol skin care cosmetic emulsion				
IT	Acne				
	(agents for treatment of; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)				

IT Skin  
(cellulite, agents for treatment of; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Cosmetics  
(conditioners; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Anti-inflammatory agents

Antioxidants

Chelating agents

Preservatives

Radical scavengers

Sunscreens

Thickening agents  
(cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Flavonoids

Polysiloxanes, biological studies  
**Retinoids**

Silicone rubber, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Cosmetics  
(creams; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Polyoxyalkylenes, biological studies

Polyoxyalkylenes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(di-Me, Me hydrogen polysiloxane-; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Polysiloxanes, biological studies

Polyoxyalkylenes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(di-Me, Me hydrogen, polyoxyalkylene-; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Cyclosiloxanes

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(di-Me; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Cosmetics  
(emulsions; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Vitamins

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(fat-soluble; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Tea products

(green tea exts.; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Carboxylic acids, biological studies

Terpenes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hydroxy; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Anesthetics

(local; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Sterols

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(phytosterols; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Silicone rubber, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(poly(oxyethylene)-; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Synthetic rubber, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(poly(oxyethylene)-siloxane; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Alcohols, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(**terpenoid**; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Silicone rubber, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(vinyl group-containing; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT Vitamins

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(water-soluble; cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

IT 58-95-7, Vitamin E acetate 68-26-8, Retinol 79-81-2, Retinyl palmitate 81-13-0, Dexpanthenol 97-59-6, Allantoin 98-92-0, Niacinamide 98-92-0D, Vitamin B3, compds. 100-51-6, Benzyl alcohol, biological studies 118-60-5, Octyl salicylate 139-33-3, Disodium EDTA 142-91-6, Isopropyl palmitate 4602-84-0, Farnesol 7069-42-3, Retinyl propionate 9006-65-9, Dimethicone 13463-67-7, Titanium dioxide, biological studies 23089-26-1, (-)- $\alpha$ -Bisabolol 43119-47-7, Tocopherol nicotinate 70356-09-1, Parsol 1789 92761-26-7, Mexoryl SX 344781-69-7, DC 9040 389622-02-0

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(cosmetic emulsions containing silicone elastomers for enhancement of delivery of oil-soluble skin care actives)

CLM What is claimed is:

1. A method to repel lice, comprising applying to a human or an animal susceptible to lice infestation an effective amount of a terpenoid or a mixture of terpenoids in an acceptable carrier for **topical** application to a human or an animal to repel lice without toxicity to the human or animal, wherein the terpenoid is selected from the group consisting of terpene-ols not including linalool, terpene-esters, unsaturated terpene, terpenoids containing an aldehyde functional group, and terpenoids containing a ketone functional group.
2. The method of claim 1, further comprising providing the terpenoid or mixture of terpenoids in an acceptable carrier in a concentration of approximately between 0.01% and 50% by weight.
3. The method of claim 2, wherein the carrier comprises a terpenoid or mixture of terpenoids in a concentration of approximately between 0.01% and 10%.
4. The method of claim 1, wherein the carrier comprises an oil containing greater than 40% terpenoid by weight.
5. The method of claim 4, wherein the oil is a perfume.
6. The method of claim 1, wherein the unsaturated terpenoid is selected from the group consisting of terpinene, pinene, limonene, myrcene, and carene.
7. The method of claim 1, wherein the terpene-ol is selected from the group consisting of perillyl alcohol, carveol, myrtenol, cis-verbenol, myrtanol, isopinocampheol, dihydrocarveol, isopulegol, **terpineol**, terpinen-4-ol, nerol, geraniol, menthol,  $\beta$ -citronellol, and dihydromyrcenol.
8. The method of claim 1, wherein the terpene-ester is selected from the group consisting of carvyl acetate, carvyl propionate, menthyl lactate, and iso bornyl acetate.
9. The method of claim 1, wherein the terpenoid aldehyde is selected from the group consisting of cytral and neral.
10. The method of claim 1, wherein the terpenoid ketone is selected from the group consisting of ionone, dihydro carvone, and pullegone.
11. The method of claim 1, wherein the carrier is a material selected from the group consisting of an aqueous solution, an alcohol solution, a gel, a cream, a powder, spray, shampoo, conditioner, and hair styling mousse.
12. The method of claim 1, wherein the carrier further comprises a compound selected from the group consisting of antimicrobial preservatives, antioxidants, repellents for insects other than lice, fragrances, substances increasing binding of terpenes to hair, and substances delaying dissolution of the terpenes.

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17. A method for killing mammalian ectoparasites and/or their eggs on a mammal, comprising applying to the mammal a composition comprising pyrethrum, benzyl alcohol,  $\alpha$ - **terpineol**, D-limonene, wherein pyrethrum, benzyl alcohol,  $\alpha$ - **terpineol**, and D-limonene are each present in an amount effective to kill ectoparasites; and a carrier for **topical** application, wherein the composition is substantially free from malathion, 3,8-P-methanediol, rotenone, and piperonal.
18. The method of claim 17 wherein the composition further comprises a synergist of pyrethrum.
19. The method of claim 18 wherein the synergist comprises piperonyl butoxide.
20. The method of claim 19 wherein pyrethrum is present from about 0.17% to about 0.33%, piperonyl butoxide is present from about 2% to about 4%, benzyl alcohol is present from about 2% to about 20%,  $\alpha$ - **terpineol** is present from about 1% to about 10%, and D-limonene is present from about 1% to about 10%.
21. The method of claim 19 wherein pyrethrum is present at about 0.17%, piperonyl butoxide is present at about 2%, benzyl alcohol is present at about 4.5%,  $\alpha$ - **terpineol** is present at about 2.5%, and D-limonene is present at about 2.5%.
22. The method of claim 17 wherein the carrier is selected from the group consisting of an alcohol solution, an alcohol dispersed system, an aqueous solution, an aqueous dispersed system and combinations thereof.
23. The method of claim 17 wherein the carrier comprises isopropanol.
24. The method of claim 17 wherein the ectoparasites are selected from the group consisting of human head lice, human body lice, human pubic lice, human mites, scabies and fleas.
25. The method of claim 17 wherein the ectoparasites comprise human head lice.
26. The method of claim 17 wherein the composition is selected from the group consisting of a cleanser and a gel.
27. A composition for killing mammalian ectoparasites and/or their eggs comprising an aromatic alcohol, one or more additional active ingredients; and a carrier for **topical** application to a mammal.
28. The composition of claim 27 wherein the aromatic alcohol comprises benzyl alcohol.
29. The composition of claim 27 wherein the aromatic alcohol comprises phenylethyl alcohol.
30. The composition of claim 27 wherein the active ingredients comprise pyrethrin.
31. The composition of claim 27 wherein the active ingredients comprise dipentene.
32. The composition of claim 27 wherein the active ingredients comprise pyrethrin and dipentene.
33. The composition of claim 27 wherein the active ingredients comprise

*α- terpineol.*

34. The composition of claim 27 wherein the active ingredients comprise *α- terpineol* and dipentene.

35. The composition of claim 27 wherein the active ingredients comprise pyrethrin, dipentene, and *α- terpineol*.

36. The composition of claim 27 further comprising a synergist.

37. The composition of claim 35 wherein the synergist comprises piperonyl butoxide.

38. The composition of claim 27 further comprising a detergent.

39. The composition of claim 38 wherein the detergent comprises laureth-4.

40. The composition of claim 27 further comprising a gel agent.

41. The composition of claim 40 wherein the gel agent comprises hydroxyethyl cellulose.

42. The composition of claim 40 wherein the gel agent comprises hydroxypropyl cellulose.

43. A method for removing mammalian ectoparasites and/or their eggs comprising applying the composition of claim 27 topically to a mammal, and cleansing the composition from the mammal, wherein the cleansing substantially removes the live and dead ectoparasites.

44. A method for killing mammalian ectoparasites and/or their eggs on a mammal infected with ectoparasites that are resistant to an active ingredient comprising, applying to a mammal infected with the ectoparasites a composition comprising i) dipentene; ii) *terpineol*; iii) an essential oil and iv) isopropanol, wherein said composition is substantially free from malathion, 3,8-P-methanediol, rotenone, and piperonal.

45. The method of claim 44 wherein said composition comprises dipentene from about 0.10% w/w to about 50.00% w/w and *terpineol* from about 0.10% w/w to about 50.00% w/w.

46. The method of claim 44 wherein said composition comprises dipentene from about 2.50% w/w to about 20.00% w/w and *terpineol* from about 2.50% w/w to about 20.00% w/w.

47. The method of claim 44 wherein said composition comprises dipentene from about 5.00% w/w to about 15.00% w/w and *terpineol* from about 5.00% w/w to about 15.00% w/w.

48. The method of claim 44 wherein the composition further comprises an active ingredient selected from the group consisting of terpinen-4-ol; 1,2,3,4-tetrahydronaphthalene; thiabendazole; ivermectin; pyriproxyfen; and aromatic alcohol.

49. A method for killing mammalian ectoparasites and/or their eggs on a mammal infected with ectoparasites that are resistant to an active ingredient comprising, applying to a mammal infected with the ectoparasites a composition comprising an aromatic alcohol; and a carrier for **topical** application, wherein the composition is substantially free from other active ingredients.

50. The method of claim 49 wherein the aromatic alcohol comprises benzyl

alcohol.

51. A composition for killing mammalian ectoparasites and/or their eggs comprising pyrethrin, piperonyl butoxide, dipentene,  $\alpha$ -**terpineol**, benzyl alcohol, ethyl alcohol, glycerin, zinc omadine, a gel agent, laureth-4, and dimethyl isosorbide.

52. A composition for killing mammalian ectoparasites and/or their eggs comprising pyrethrin, piperonyl butoxide, dipentene,  $\alpha$ -**terpineol**, benzyl alcohol, ethyl alcohol, propylene glycol, zinc omadine, a gel agent, laureth-4, and dimethyl isosorbide.

PI US 2003040504 A1 20030227 |

(FILE 'HOME' ENTERED AT 17:47:47 ON 24 JUN 2004)

FILE 'USPATFULL' ENTERED AT 17:47:58 ON 24 JUN 2004

L1 478 S TERPINEOL/CLM  
L2 8 S L1 AND TOPICAL/CLM  
L3 0 S TERPINEOL/AB AND TOPICAL/AB  
L4 61 S TERPINEOL/AB  
L5 1 S L4 AND TOPICAL/CLM

FILE 'CAPLUS, USPATFULL' ENTERED AT 17:52:23 ON 24 JUN 2004

L6 34 FILE CAPLUS  
L7 79 FILE USPATFULL

TOTAL FOR ALL FILES

L8 113 S TERPENEOL OR TERPENIOL  
L9 19481 FILE CAPLUS  
L10 1610 FILE USPATFULL

TOTAL FOR ALL FILES

L11 21091 S TERPENEOL OR TERPENIOL OR TERPENOID  
L12 27 FILE CAPLUS  
L13 68 FILE USPATFULL

TOTAL FOR ALL FILES

L14 95 S L11 AND (RETINOIC OR RETINOID)  
L15 5 FILE CAPLUS  
L16 42 FILE USPATFULL

TOTAL FOR ALL FILES

L17 47 S L11 AND (RETINOIC OR RETINOID) AND TOPICAL

FILE 'REGISTRY' ENTERED AT 17:59:13 ON 24 JUN 2004

L18 0 S TERPENIOL/CN  
L19 0 S TERPENEOL/CN  
L20 1 S TERPINEOL/CN  
L21 0 S TERPENEOL/CN  
L22 1 S TERPENEOL  
L23 3 S TERPENE ALCOHOL  
SAVE ALL L10079416/L

FILE 'USPATFULL, CAPLUS' ENTERED AT 18:18:09 ON 24 JUN 2004

FILE 'CAPLUS' ENTERED AT 18:29:19 ON 24 JUN 2004

L24 9599 S TERPINEOL  
L25 38 S L24 AND (TOPICAL AND SKIN)  
L26 13 S L25 AND TREAT?  
L27 15 S TERPINEOL AND CYTOCHROME

FILE 'MEDLINE, SCISEARCH, EMBASE, CAPLUS' ENTERED AT 18:51:42 ON 24 JUN 2004

L28 0 FILE MEDLINE  
L29 0 FILE SCISEARCH  
L30 0 FILE EMBASE  
L31 1 FILE CAPLUS  
TOTAL FOR ALL FILES

L32 1 S TERPINEOL AND (P450 1A)  
L33 0 FILE MEDLINE  
L34 0 FILE SCISEARCH  
L35 0 FILE EMBASE  
L36 1 FILE CAPLUS

TOTAL FOR ALL FILES

L37 1 S TERPINEOL AND (P450 (3A) 1A)  
L38 218 FILE MEDLINE  
L39 293 FILE SCISEARCH  
L40 452 FILE EMBASE  
L41 205 FILE CAPLUS

TOTAL FOR ALL FILES

L42 1168 S (P450 (3A) 1A)  
L43 208 FILE MEDLINE  
L44 292 FILE SCISEARCH  
L45 448 FILE EMBASE  
L46 711 FILE CAPLUS  
TOTAL FOR ALL FILES  
L47 1659 S (CYTOCHROME (5A) 1A)  
L48 2 FILE MEDLINE  
L49 0 FILE SCISEARCH  
L50 1 FILE EMBASE  
L51 2 FILE CAPLUS  
TOTAL FOR ALL FILES  
L52 5 S L47 AND (TERPENOID OR TERPINEOL OR TERPEN?)

FILE 'STNGUIDE' ENTERED AT 18:58:25 ON 24 JUN 2004